

Centralized Waste Treatment Permitting Workshop



Chicago
February 20, 2003

What is a CWT Facility?



A facility which treats and/or recovers any hazardous or non-hazardous *industrial* waste, wastewater, or used material received from off-site.

No Really, What is a CWT Facility?



To make the determination, ask yourself three questions:

1. Does the facility accept waste from off-site?
2. Does the facility treat and/or recover these wastes?
3. Are the facility's CWT activities covered by the rule?

What are CWT Wastewaters?



Major Streams:

- off-site waste receipts
- emulsion breaking/gravity separation wastewater
- solubilization wastewaters

Incidental Streams:

- treatment equipment washes
- laboratory derived wastewater
- air pollution control scrubber blowdown
- contaminated stormwater
- transport washes (tanker truck / drum / roll-off boxes)
- landfill wastewaters from on-site landfills.

Applicability



CWT Activity	Regulated by this rule	Not Regulated
POTWs	none	all
Sanitary wastes or toilet wastes	none	all
Food processing wastes	none	all
Manufacturing facilities	see next slide	see next slide
Pipeline materials	materials received via pipeline from waste consolidators or commingled with other covered CWT wastewaters	all other piped materials and POTWs

Applicability, Manufacturing



Manufacturing facilities that also perform CWT activities may not be subject to the CWT rule.

- Ask the following questions:
 - Is the off-site waste generated by a process subject to the same limitations/ standards as the on-site waste?
 - Is the off-site waste similar and compatible with on-site wastes, as determined by the permitting or control authority?

Applicability



CWT Activity	Regulated by this rule	Not Regulated
Recycle/recovery activities	all unless specifically excluded elsewhere	
Scrap metals recyclers	none	all
Solids, soils, and sludges	those activities which generate a wastewater unless specifically excluded	“dry” operations
Transfer stations and recycling centers	none	all
Grease trap/interceptor wastes	those which contain petroleum based oils	those which contain animal or vegetable fats/oils

Subcategorization



Subcategorization is based upon the type of waste/ wastewater/used material accepted for treatment or recovery.

What are the CWT Subcategories?

- A. Metal Bearing Waste Treatment and Recovery Subcategory (Metals)**
- B. Oily Waste Treatment and Used Oil Recovery Subcategory (Oils)**
- C. Organic Waste Treatment Subcategory (Organics)**
- D. Multiple Wastestream Subcategory (Mixed)**

Pretreatment Standards for Existing Sources (PSES) Technology Bases:



Metals: 2 stages of chemical precipitation with solids/liquid separation steps

CN Subset: 2 stage alkaline chlorination

Oils: emulsion breaking/gravity separation and dissolved air flotation (DAF)

Organics: equalization and biological treatment

Pretreatment Standards for New Sources (PSNS) Technology Bases:



Metals: 2 stages of chemical precipitation with
solids/liquid separation steps

CN Subset: 2 stage alkaline chlorination

Oils: emulsion breaking/gravity separation,
secondary gravity separation, and DAF

Organics: equalization and biological treatment

Best Available Technology (BAT) Technology Bases:



Metals: 2 stages of chemical precipitation with solids/
liquid separation steps and followed by *sand
filtration*

CN Subset: 2 stage alkaline chlorination

Oils: emulsion breaking/gravity separation,
secondary gravity separation, and DAF

Organics: equalization and biological treatment

New Source Performance Standards (NSPS) Technology Bases:



Metals: *Selective metals precipitation* followed by
secondary and tertiary precipitation steps
and solids/liquid separation steps

CN Subset: 2 stage alkaline chlorination

Oils: emulsion breaking/gravity separation,
secondary gravity separation, and DAF

Organics: equalization and biological treatment

Subcategory Determination



1. Waste receipt data collection -- collected when each shipment is received at the facility
2. Compare waste receipt information and waste receipt classification table (Table XIII.A-1 in the preamble)
3. Waste characterization using numerical criteria, if the waste receipts are not listed in the table

Multiple Wastestream Subcategory



What options do facilities have if they accept wastes from more than one subcategory?

- comply with each set of applicable subcategory limitations or standards directly following treatment (before commingling); or
- certify equivalent treatment and comply with one of the four sets of limitations or standards from the multiple wastestream subcategory.

Equivalent Treatment



- Equivalent treatment means a wastewater treatment system that achieves comparable pollutant removals to the applicable treatment technology selected as the basis for the limits and standards.
- Comparable removals may be demonstrated through references in technical and engineering treatises, journals or other literature, treatability tests, or self-monitoring data.

Equivalent Treatment



The CWT facility must do three things to demonstrate equivalent treatment:

1. submit an initial certification statement;
2. submit periodic certification statements; and
3. maintain on-site compliance paperwork.

Equivalent Treatment, Initial Certification



The CWT rule requires the initial certification to include three items:

1. A list and description of the subcategories of wastes accepted for treatment at the facility;
2. A list and description of the treatment systems for each applicable subcategory along with their operating conditions;
3. Information and supporting data establishing that these treatment systems will achieve equivalent treatment.

Equivalent Treatment, Periodic Certification



- The periodic certification is a written submission to the permitting or control authority that certifies the facility is operating its treatment systems to provide equivalent treatment as set forth in its initial certification
- In the event that the facility has modified its treatment systems, it must also include a justification to allow modification of the practices listed in its initial certification.
- The periodic certification statement must be submitted once per year.

Equivalent Treatment, On-site Paperwork



On-site compliance paperwork includes the following:

- A general list and description of the applicable subcategories;
- A list and description of the treatment systems for each applicable subcategory along with operating conditions;
- Information and supporting data establishing that these treatment systems will achieve equivalent treatment.
- A description of the procedures it follows to ensure that its treatment systems are well-operated and maintained; and
- An explanation of why the procedures it has adopted will ensure its treatment system are well-operated and maintained.

Compliance Times

Type of CWT Facility	Requirement	Deadline
Existing Indirect Discharger	Comply with PSES	Dec 22, 2003
New Indirect Discharger*	Comply with PSNS	when you begin discharging
Existing Direct Discharger	Comply with BPT and BAT	when your federal or state NPDES permit is re-issued
New Direct Discharger*	Comply with NSPS	when you begin discharging

* For the CWT rule, a new source is a facility that commenced construction after August 28, 2000 (signature of rule).

Example One



- An existing facility with over 30 customers mainly accepts metal finishing rinsewaters.
- Recently, the facility also began accepting used oils for recovery.
- The facility also accepts wastewaters which are unknown in origin.
 - These wastewaters have oil and grease levels above 100 mg/L.
- The facility generates emulsion breaking and equipment cleaning wastewaters.
- The facility discharges rainwater collected on its property, but all its CWT operations occur inside a building.

Example One, cont.

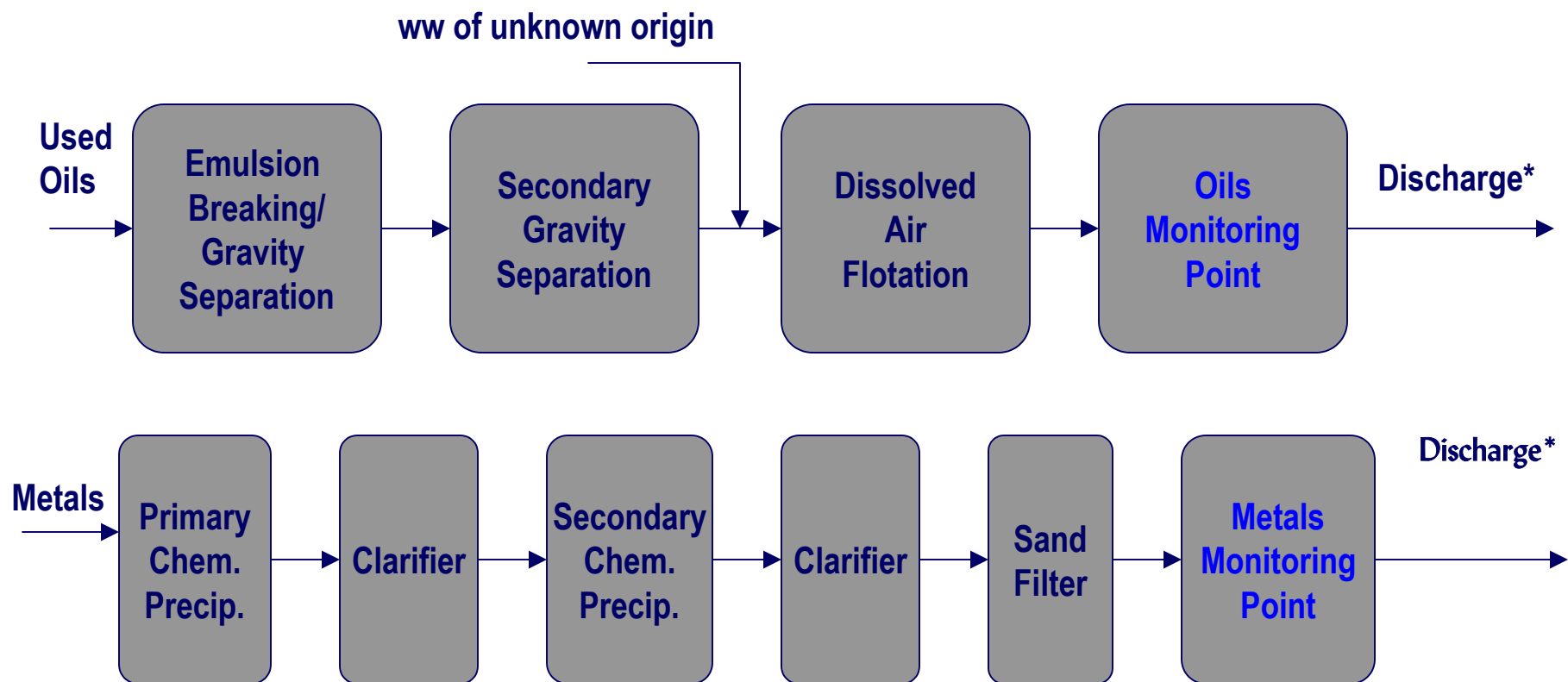


- Metal finishing wastes are classified as metals subcategory wastes.
- Used Oils are classified as oils subcategory wastes.
- Wastes of unknown origin with > 100 mg/L O&G are oils wastes.
- Emulsion breaking wastewaters are oils wastes.
- Equipment cleaning wastewaters could be oils or metals wastewater.
- The collected rainwater is non-contaminated stormwater: non-CWT.

- This facility clearly treats/recovers only oils and metals wastes.

Example One, cont.

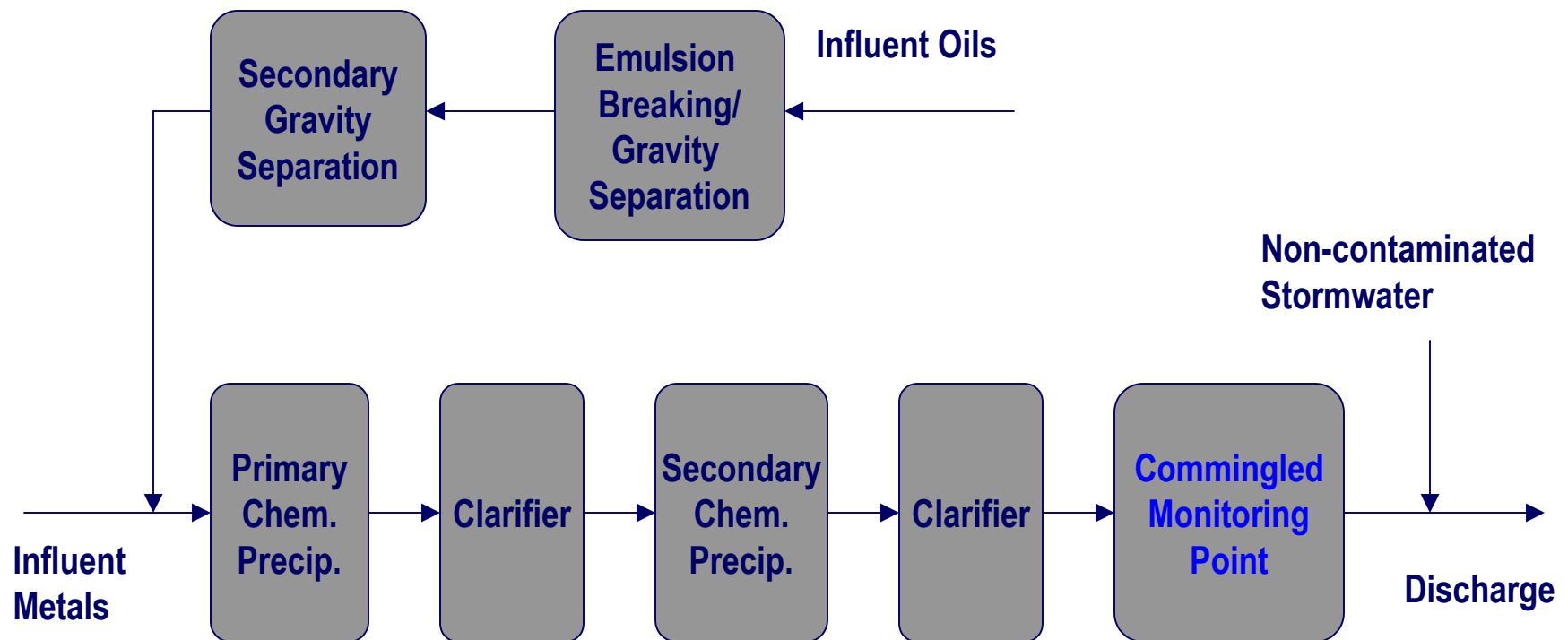
Wastewater Treatment Diagram -- Simple



*Stormwater discharged separately

Example One, cont.

Wastewater Treatment Diagram -- Complex



Example One, cont.



Permitting Options for Example Facility - Complex

- Either comply with multiple wastestream subcategory and demonstrate equivalent treatment, or
- Augment treatment system to allow segregation of oils and metals wastes.

Example One, cont.



Permitting Options for Example Facility - Complex (cont.)

- If the facility demonstrates equivalent treatment and decides to comply with the multiple wastestream subcategory, what section would the standards come from?
 - Pretreatment standards for existing sources (PSES) for combinations of subparts A and B (metals and oils) are found in section 437.46(c)(1).
 - BPT limitations are found in section 437.42(c)(1).
 - BAT limitations are found in section 437.44(c)(1).

Example Two

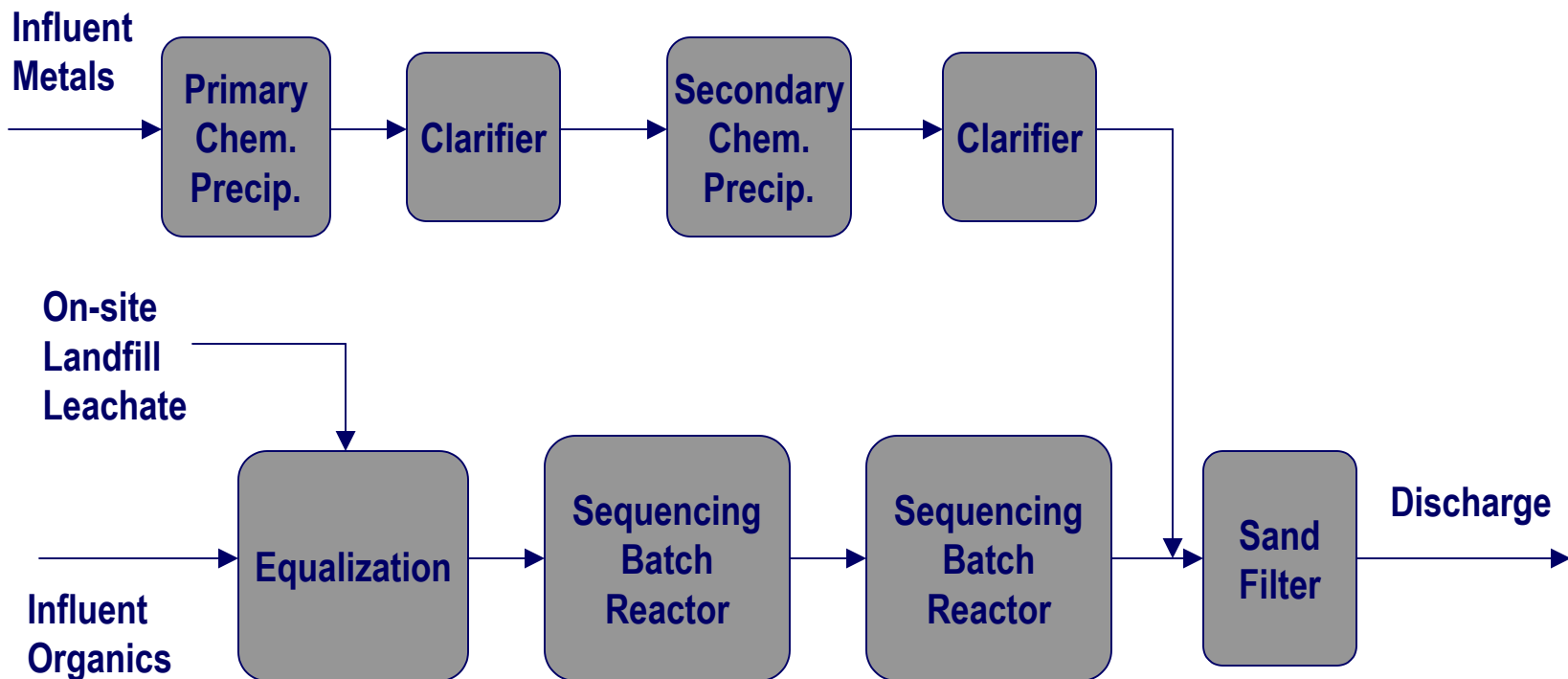


Metals and Organics Facility

- Receives a consistent profile and volume of wastes
- Accepts the following metals wastewaters annually:
 - metal finishing rinsewaters
 - spent electroplating baths
 - ww from an iron and steel manufacturer
- Accepts the following organics wastewaters annually:
 - ww from organic chemical manufacturing
 - ww from on-site hazardous landfill leachate

Example Two, cont.

Wastewater Treatment Diagram



Example Two, cont.



Permitting Options for the Metals and Organics Facility

- Because the facility accepts categorical wastewaters from no more than 5 facilities, the permitting or control authority could develop “alternative effluent limitations.”
- What are alternative effluent limitations?
 - Permitting or control authority can decide to develop flow-weighted limitations by applying those set forth in 40 CFR subchapter N that would have applied if the waste had been treated on-site at the point of generation.
- This example could be a case for alternative limitations provided the pollutant profiles and flows are consistent.

Example Two, cont.



Permitting Options for the Metals and Organics Facility, cont.

- “Alternative” approach using applicable guidelines.
- Separate monitoring for metals and organics subcategories prior to commingling (provided the permitting or control authority does not develop “alternative” limits or the facility is not applying for the multiple wastestream subcategory).
- If the facility so chooses, and the permitting or control authority has not developed “alternative” limits, it may elect to demonstrate equivalent treatment for the multiple wastestream subcategory.